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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
CHEN, WENPENG	
ART UNIT	**PAPER NUMBER**
2624	

DATE MAILED: 05/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/039,973	PALMER ET AL.	
	Examiner	Art Unit	
	Wenpeng Chen	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 February 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Examiner's responses to Applicant's remark

1. Applicant's amendments and arguments filed on 2/3/2005 have been fully considered.

2. The amendments overcome the following set forth in Office Action mailed 11/3/2004:

-- rejections to Claims 4-6, 12-14, and 20-22 under 35 U.S.C. 112, second paragraph;

-- rejections to Claims 17-24 under 35 U.S.C. 101.

3. Applicant's amendments with regard to art rejections are not persuasive. The Examiner has thoroughly reviewed Applicant's arguments but firmly believes that the cited reference to reasonably and properly meet the recited limitation of the original and amended claims..

Applicants' argument -- Mead does not teach (1) the feature recited in the amended Claim 1 "generating a packaged image, whîch includes a decoding table comprising said first selected one of said one or more subregions and said corresponding identifier of said first selected one of said one or more subregions in place of said second selected one of said one or more subregions" nor (2) the feature recited in the original Claim 2 "separating the packaged image into an image data structure and a decoding table containing one or more references and one or more corresponding identifiers."

Examiner's response -- The Examiner disagrees with the conclusion.

The Examiner cited portions of Mead (Figs. 1-2; column 3, line 56 to column 4, line 26; column 4, lines 47-67) also teaches feature (1) referred above. Mead compares an object that is part of an image with objects stored in the library 52. If there is a match, an existing identifier from library is used to code the object. If not, the unrecognized object with its corresponding identifier is stored in the library for future matching (column 4, lines 18-26.) Also the unrecognized object with its corresponding identifier are transmitted to the decoder (column 4, lines 54-55.) Let us use an example to explain how Mead teaches the amended Claim 1. When one just starts the system taught in Figs.1-2, there is no recognized object in library 52. A first selected one of subregion is compared with the information in the library 52. Because it is empty, the first selected one is assigned an identifier. Both the first selected and its corresponding identifier are stored in library 52 and transmitted to the decoder. Then a second selected one of subregions is extracted. The second selected one now can be compared with first selected one. If there is a match, the identifier corresponding to the first selected one is assigned to the second selected one. If not, the second selected one is assigned a second identifier. Both the second selected and the second identifier are stored in library 52 and transmitted to the decoder.

The Examiner cited portions of Mead (Figs. 1 and 3; column 5, lines 28-58)

teach feature (2) referred above. The code of the unrecognized signal is the identifier that is transmitted to the decoder side. As explained previously, the data of unrecognized objects and their symbolic codes form a decoding table. The argument with regard to feature (1) above is also applied here. For unrecognized objects, both images of the objects and their corresponding identification codes have to be provided to the decoder. Otherwise, the decoder cannot decode the data stream.

Applicants' argument -- With regard to rejections to Claims 3 and 11 under U.S.C. 103(a) based on Mead in view of Mehrotra, no motivation or suggestion for combination is found in the cited reference. The Examiner failed to establish a *prima facie* case of obviousness.

Examiner's response -- The Examiner disagrees with the conclusion. As the Applicant correctly cited in page 16 of the response, motivation or suggestion for combination can also be relied on the knowledge generally available to one of ordinary skill in the art. Actually, obvious advantage of combination was based on the knowledge.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-2, 4, 6-10, 12, and 14-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Mead (US patent 6,683,993 cited previously.)

For Claims 9, 12, 14, and 16, Mead teaches an apparatus for reducing datastream transmission bandwidth requirements, comprising (also seeing the Examiner's response above):

-- means for, in response to determining that an image data structure is present in a datastream, (column 2, line 66 to column 3, line 23; Audio and video data are inputted to segment element 16 of Fig. 1. Segment element 16 segments the data according its type. The segmenting process inherently has a determining mean.)

-- extracting said image data structure from said datastream; (column 2, line 66 to column 3, line 23; Audio and video data are inputted to segment element 16 of Fig. 1. Segment element 16 extracts the video data.)

-- means for dividing said image data structure into one or more subregions; (element 46 of Fig. 2; column 3, lines 42-55)

-- means for associating a corresponding identifier with a first selected one of said one or more subregions; (column 3, line 56 to column 4, line 15)

-- means, in response to determining that said first selected one of said one or more subregions is substantially identical to a second selected one of said one or more subregions, (column 3, line 56 to column 4, line 26; element 50 of Fig. 2)

-- means for replacing second selected one of said one or more subregions with said corresponding identifier of said first selected one of said one or more subregions; (column 3, line 56 to column 4, line 26; element 50 of Fig. 2; The symbolic code is the identifier.)

-- means for reducing transmission bandwidth requirements by generating a packaged image, which includes a decoding table comprising said first selected one or more subregions and said corresponding identifier of said first selected one of said one or more subregions in place of said second selected one of said one or more subregions; (column 3, line 56 to column 4, line 26; column 4, lines 47-67; A packaged image data of both unrecognized objects and

symbolic codes of recognized objects are formed in multiplexer 54 and variable length coder of Fig. 2. The data of unrecognized objects and their symbolic codes form a decoding table.)

-- inserting said packaged image into said data stream; (column 3, line 56 to column 4, line 26; column 4, lines 47-67; A packaged image data of both unrecognized objects and symbolic codes of recognized objects are formed in multiplexer 54 and variable length coder of Fig. 2.)

-- means for transmitting said modified data; (column 3, line 56 to column 4, line 26; column 4, lines 47-67; The data are transmitted as element 67 of Fig. 2.)

-- wherein the reducing transmission bandwidth requirements by generating comprises means for retaining a symbol dictionary of references and identifiers employed by the determining means in processing a previously analyzed image data structure; (object library 22 of Fig. 1)

-- wherein the reducing transmission bandwidth requirements by generating further comprises means for storing a preloaded set of references on a sending machine and omitting preloaded references from the decoding table; (column 3, line 56 to column 4, line 26; column 4, lines 47-67; The data are transmitted as element 67 of Fig. 2. The data of unrecognized objects and their symbolic codes form a decoding table. The recognized objects and their corresponding symbolic codes are preloaded in libraries 22 and 32 of Fig. 1.)

-- means for examining a datastream for the presence of one or more image data items; (column 2, line 66 to column 3, line 23; Audio and video data are inputted to segment element 16 of Fig. 1. Segment element 16 segments the data according its type. Segment element 16 extracts the video data.)

-- means for, responsive to the presence of one or more image data items, examining the one or more image data items for the presence of one or more repeated visual data elements; (column 3, line 56 to column 4, line 26; element 50 of Fig. 2)

-- means for, responsive to the presence of one or more repeated visual data elements, recoding the datastream with one or more replacement markers inserted to replace the one or more repeated visual data elements and with a decoding table for translating the one or more replacement markers during decoding. (column 3, line 56 to column 4, line 26; column 4, lines 47-67)

For Claims 10 and 15, Mead teaches an apparatus for decoding a packaged image, comprising:

-- means for determining whether a packaged image is present in a datastream; (Figs. 1 and 3; column 5, lines 28-41)

-- means for, responsive to determining that a packaged image is present in a datastream, extracting the packaged image; (Figs. 1 and 3; column 5, lines 28-41)

-- means for separating the packaged image into an image data structure and a decoding table containing one or more references and one or more corresponding identifiers; (Figs. 1 and 3; column 5, lines 28-58)

-- means for modifying the image data structure to replace any identifiers present in the image data structure with corresponding references; (Figs. 1 and 3; column 5, lines 28-58; Objects are generated based on the transmitted symbolic codes.)

-- wherein the modifying means further comprises means for replacing identifiers with references from a preloaded decoding table. (Figs. 1 and 3; column 5, lines 28-58; Objects are generated based on the transmitted symbolic codes. The generation is based on the library 84.)

The above-cited passages of Mead also teach the corresponding methods of Claims 1-2, 4, and 6-8.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 3 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mead (US patent 6,683,993) as applied to Claims 1 and 9, and further in view of Mehrotra et al. (US patent 6,571,016 cited previously.)

Mead teaches the parent Claims 1 and 9.

However, Mead does not teach the feature related to the recited effective size.

Mehrotra teaches an apparatus for coding images with codebook (library), comprising:

-- a dividing means comprises means for analyzing an image to determine the most effective size of a subregion. (Fig. 12a; column 19, lines 8-17; The analyzing means is step 1212 of Fig. 12a for optimizing the combination of quality and compression efficiency.)

It is desirable to optimize the combination of quality and compression efficiency in image compression. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to apply Mehrotra's teaching to decide the most effective size for each subregion of Mead's image for compression, because the combination improves combination of quality and compression efficiency.

8. Claims 5 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mead (US patent 6,683,993) as applied to Claims 4 and 12, and further in view of Frazier et al. (US patent 5,689,255 cited previously.)

Mead teaches the parent Claims 4 and 12.

However, Mead does not teach the feature related to the recited statistics and removing references.

Frazier teaches an apparatus for coding images with codebook (library), comprising:

-- means for maintaining descriptive statistics on the frequency with which references stored in the symbol dictionary are employed and selectively removing the references when the frequency of their occurrence falls. (column 7, lines 45-63)

It is desirable to optimize image compression with a finite size code table (code book) by removing references that fail to occur recently to make room for new entry. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to apply Frazier's teaching to removing stored references that fail to appear recently to make room for newly unrecognized objects and their corresponding symbolic codes of Mead's system, because the combination improves image compression with a finite size code table.

9. Claims 17-18, 20, and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mead (US patent 6,683,993) as applied to Claims 1-2, 4, 6-8, and further in view of Pearlman et al. (US patent 5,764,807 cited previously.)

Mead, as discussed above, teaches the corresponding method claims 1, 4, 6, 2, 7-8 of program-product of Claims 17, 20, 22, 18, and 23-24, respectively . However, Mead does not explicitly teach a computer program product as recited in the claims.

Pearlman teaches a computer program product comprising a computer readable medium carrying a computer program. (Column 2, lines 47-53)

It is desirable to make a processing method portable from a computer to another computer. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to store the processing steps of the method taught by Mead in a computer readable medium taught by Pearlman, because the combination makes the processing method portable and therefore increase its application.

10. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Mead and Mehrotra as applied to Claim 3, and further in view of Pearlman et al. (US patent 5,764,807.)

The combination of Mead and Mehrotra, as discussed above, teaches the corresponding method claim 3 of program-product of Claim 19. However, the combination does not explicitly teach a computer program product as recited in the claims.

Pearlman teaches a computer program product comprising a computer readable medium carrying a computer program. (Column 2, lines 47-53)

It is desirable to make a processing method portable from a computer to another computer. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to store the processing steps of the method taught by the combination of Mead and Mehrotra in a computer readable medium taught by Pearlman, because the combination makes the processing method portable and therefore increase its application.

11. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Mead and Frazier as applied to Claim 5, and further in view of Pearlman et al. (US patent 5,764,807.)

The combination of Mead and Frazier, as discussed above, teaches the corresponding method claim 5 of program-product of Claim 21. However, the combination does not explicitly teach a computer program product as recited in the claims.

Pearlman teaches a computer program product comprising a computer readable medium carrying a computer program. (Column 2, lines 47-53)

It is desirable to make a processing method portable from a computer to another computer. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to store the processing steps of the method taught by the combination of Mead and Frazier in a computer readable medium taught by Pearlman, because the combination makes the processing method portable and therefore increase its application.

Conclusion

12. THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). The Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for response to this final action is set to expire THREE MONTHS from the date of this action. In the event a first response is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event will the statutory period for response expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wenpeng Chen whose telephone number is 571-272-7431. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K Moore can be reached on 571-272-7437. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9306 for After Final communications. TC 2600's customer service number is 571-272-2600.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2600.

Wenpeng Chen
Examiner
Art Unit 2624

May 17, 2005